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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,940	03/23/2005	Timothy J Mousley	GB 020164	6581

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EXAMINER

HU, RUI MENG

ART UNIT PAPER NUMBER

2631

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/528,940

Applicant(s)

MOULSLEY ET AL.

Examiner

RuiMeng Hu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/23/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 12-13 is/are rejected.
- 7) ☒ Claim(s) 5-9 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/23/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/09/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 11/09/2005 has been considered by the examiner and made of record in the application file.

Drawings

3. The drawings are objected to because of failing to label features descriptively.

Specification

4. The disclosure is objected to because of the following informalities:
 - a) On page 10 line 24, "FDD" is not defined,
 - b) On page 10 lines 25 and 26, "TDD" is not defined.Appropriate correction is required.

Claim Objections

5. **Claims 1, 10 and 12-13** are objected to because of the following informalities:
 - a) In **claim 1** line 2, insert --:--, after "comprising",
 - b) In **claim 1** line 4, delete "the method comprising",

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c) In **claim 10** line 1, insert --:--, after "comprising",

d) In **claim 12** line 2, insert --:--, after "comprising",

e) In **claim 13** line 2, insert --:--, after "comprising".

Claims 5-9 and 11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-9 and 11 have not been further treated on the merits.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1, 10 and 12-13** are rejected under 35 U.S.C. 102(e) as being anticipated by **Walton et al. (U.S. Patent Application Publication # 20030128658)**.

Consider **claim 1**, Walton et al. clearly disclose a method of operating a packet data transmission system (paragraph 0002, figures 8A and 8B) comprising: a primary station (base station 104) having a plurality of antennas (antennas 824) and at least one secondary station (terminals 106) having a plurality of antennas (antennas 852), the primary station (base station 104) transmitting packet data on signal paths between

pairs of primary and secondary station antennas (figure 8A), the secondary station (106a) monitoring its radio environment (channel state information (CSI)) (paragraph 0248) and sending information about its radio environment to the primary station (base station 104) (paragraph 0249), the primary station (base station 104) in response to this information adapting itself (paragraph 0250) and the secondary station (106a) configuring its receiver resources (antennas 852) for processing the received data and interference (paragraphs 0247, 0043 and 0179).

Consider **claim 10**, Walton et al. clearly disclose a packet data transmission system (paragraph 0002, figures 8A and 8B) comprising: a primary station (base station 104) having a plurality of antennas (antennas 824), signal transmitting (822) and receiving means (822) and means for adapting itself in response to a received signal from a secondary station (terminal 106a) (paragraphs 0248-0250), and at least one secondary station (terminal 106a) having signal transmitting and receiving means (854), a plurality of antennas (antennas 852), means for monitoring its radio environment and for transmitting a signal including information about its radio environment (paragraph 0248), and means for configuring its receiver resources for processing data signals received from the adapted primary station and interference (paragraphs 0247-0250, 0043 and 0179).

Consider **claim 12**, Walton et al. clearly disclose a secondary station (terminal 106a) for use in a packet data transmission system (paragraph 0002, figures 8A and 8B) comprising: a primary station (base station 104) having a plurality of antennas (antennas 824) and signal transmitting (822) and receiving means (822), the secondary

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station (terminal 106a) having signal transmitting and receiving (854) means, a plurality of antennas (852) and means for monitoring its radio environment and for transmitting a signal including information about its radio environment (paragraph 0248), and means for configuring its receiver resources (852) for processing received data signals and interference (paragraphs 0247-0250, 0043 and 0179).

Consider **claim 13**, Walton et al. clearly disclose a primary station (base station 104) for use in a packet data transmission system (paragraph 0002, figures 8A and 8B), the primary station (base station 104) comprising: a plurality of antenna (antennas 824), signal transmitting (822) and receiving means, and means responsive to a received signal from a secondary station (terminal 106a) for adapting the mode of transmission of the signals transmitted to the secondary station (paragraphs 0247-0250 and 0043).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Walton et al. (U.S. Patent Application Publication # 20030128658)** in view of **Gore et al. (U.S. Patent # 6917820 B2)**.

Consider **claim 2, as applied to claim 1 above**, Walton et al. fail to disclose characterized in that the secondary station (terminal 106a) recommends to the primary station (base station 104) how it should adapt itself.

In the same field of endeavor, Gore et al. clearly disclose a communication terminal (figure 1, receiver 32) recommends to the primary station (figure 1, transmitter 30) how it should adapt itself (Based on the information computed by the computation unit 320, the switch 303 selects the optimal set of antennas) (column 4 lines 30-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Gore et al. into the art of Walton et al. as to select the optimal set of antennas for improving performance criteria over a wireless link.

Consider **claim 3, as applied to claim 2 above**, Walton et al. as modified by Gore et al. fail to disclose characterized in that the secondary station recommends that the primary station use a particular subset of antennas for transmitting packet data.

In the same field of endeavor, Gore et al. clearly disclose a communication terminal (figure 1, receiver 32) recommends to the primary station (figure 1, transmitter 30) use a particular subset of antennas for transmitting packet data (Based on the information computed by the computation unit 320, the switch 303 selects the optimal set of antennas) (column 4 lines 30-63, column 5 lines 42-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Gore et al. into the art of Walton et al. as modified by Gore et al. as to select the optimal set of antennas for improving performance criteria over a wireless link.

Consider **claim 4, as applied to claim 2 or 3 above**, Walton et al. as modified by Gore et al. fail to disclose characterized in that the secondary station recommends the maximum desired number of receivable transmission antennas to be used by the primary station.

In the same field of endeavor, Gore et al. clearly disclose characterized in that the secondary station recommends the maximum desired number of receivable

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transmission antennas to be used by the primary station (Based on the transmitter capacity and the information computed by the computation unit 320, the switch 303 would select the maximum desired number of antennas) (column 1 line 62-column 2 line 2, column 4 lines 30-63, column 5 lines 42-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Gore et al. into the art of Walton et al. as modified by Gore et al. as to select the optimal set of antennas for improving performance criteria over a wireless link.

Conclusion

11. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed**

to: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RuiMeng Hu
R.H./rh
September 7, 2006


RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
9/13/06